REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested. Upon entry of this amendment, claims 29-32 are added, leaving claims 21, 27 and 29-32 pending with claims 21 and 27 being independent. No new matter has been added.

Rejections Under 35 U.S.C. §112, second paragraph

Claims 21 and 27 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants submit that claims 21 and 27 were amended in the previous Response to overcome this rejection. As indicated in the Advisory Action, Applicant's reply (filed January 5, 2011) overcomes this rejection.

Rejections Under 35 U.S.C. §103(a)

Claims 21 and 27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shintani (JP 11-080952) in view of Hidaka et al. (JP 10-106441), Kim et al. and Okuyama et al (JP 2001-243886).

Applicants respectfully traverse this rejection and submit that the claims as now pending are allowable over the cited prior art. Specifically independent claim 21 recites a method of manufacturing a plasma display panel (PDP) comprising a process of forming a metal oxide film comprising introducing oxygen gas into a deposition room and controlling a partial pressure of the oxygen gas within a range from $3x10^{-3}$ Pa to $3x10^{-2}$ Pa, so as to restrain an amount of dangling bonds in the metal oxide film, and introducing another gas into the deposition room so as to increase an amount of the dangling bonds in the metal oxide film, the another gas including carbon monoxide, carbon dioxide, or carbon monoxide and carbon dioxide, wherein when the another gas includes carbon monoxide, controlling a partial pressure of the carbon monoxide within a range from $1x10^{-3}$ Pa to $5x10^{-2}$ Pa, wherein when the another gas includes carbon dioxide, controlling a partial pressure of the carbon dioxide within a range from $1x10^{-4}$ Pa to $3x10^{-3}$ Pa, and wherein the degree of vacuum in the deposition room is controlled within a predetermined range by adjusting an amount of an inert gas introduced into the deposition room.

The cited prior art fails to disclose or render obvious such a method. In particular, the Examiner recognizes that Shintani fails to disclose introducing another gas including at least one gas selected from the group consisting of carbon monoxide and carbon dioxide. For this element, the Examiner cites Kim, stating that Kim discloses that the secondary emission coefficient changes for an MgO film with exposure to water vapor or carbon dioxide. However, the Examiner appears to be simply taking elements of the claims and combining the elements without some articulated reasoning with some rational underpinning. Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *See In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006). That is, the Examiner states that one of ordinary skill would have modified Shintani using Hidaka to enhance crystal orientation of the MgO film, and modified this combination with Kim since carbon dioxide changes the secondary emission coefficient of the MgO film similarly to water vapor. Applicants submit that there is no articulated reasoning with some rational underpinning as to why one of ordinary skill in the art would have modified the combination of Hidaka and Shintani to change the secondary emission coefficient of the MgO film. Moreover, there is no disclosure that such a combination would have increased an amount of the dangling bonds in the metal oxide film, as required by the another gas in claim 21 of the present application.

Moreover, Okuyama fails to overcome these deficiencies and there is no reasoning in the prior art to modify any of the cited prior art such that the combination thereof would have rendered independent claim 21 obvious. Therefore, Applicants submit that independent claim 21 is allowable over the cited prior art.

Applicants submit that independent claim 27 is allowable for reasons similar to those set forth above. Namely, the cited prior art fails to disclose or render obvious an apparatus for manufacturing a plasma display panel (PDP) comprising a gas-introducing means for introducing oxygen gas to restrain an amount of dangling bonds in the metal oxide film and another gas to increase an amount of the dangling bonds in the metal oxide film into the deposition room, the another gas capable of including carbon monoxide, carbon dioxide, or carbon monoxide and carbon dioxide, wherein the partial pressure of the oxygen gas is controlled within a range from $3x10^{-3}$ Pa to $3x10^{-2}$ Pa, wherein when the another gas includes carbon monoxide, controlling a partial pressure of the carbon monoxide within a range from $1x10^{-3}$ Pa to $5x10^{-2}$ Pa, wherein

when the another gas includes carbon dioxide, controlling a partial pressure of the carbon dioxide within a range from $1x10^{-4}$ Pa to $3x10^{-3}$ Pa, and wherein the degree of vacuum in the deposition room is controlled within a predetermined range by adjusting an amount of an inert gas introduced into the deposition room, as recited in claim 27.

New Claims 29-32

New claims 29 and 30 recite that the another gas includes carbon monoxide and carbon dioxide and new claims 31 and 32 recite that the another gas includes carbon monoxide. There is no disclosure in any of the cited prior art of such gases.

Conclusion

In view of the foregoing amendments and remarks, all of the claims now pending in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

Should the Examiner believe there are any remaining issues that must be resolved before this application can be allowed, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Michihiko TAKASE et al.

By /Jeffrey J. Howell/
2011.02.07 15:58:15 -05'00'
Jeffrey J. Howell
Registration No. 46,402
Attorney for Applicants

JJH/ete
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
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